

Session 2: Network tariffs, tariff structure statements and developments in the energy sector

Today's training will cover:

- Recap from session 1
- The energy bill price stack
- Network vs retail tariffs
- Pricing principles and the tariff structure statement process including a case study
- Developments in the energy sector
- Tariff reform, network tariffs and the energy transition – the consumer advocate perspective

Energy bill stack and the interaction between network tariffs and retail tariffs

Figure 1: Components of a retail bill

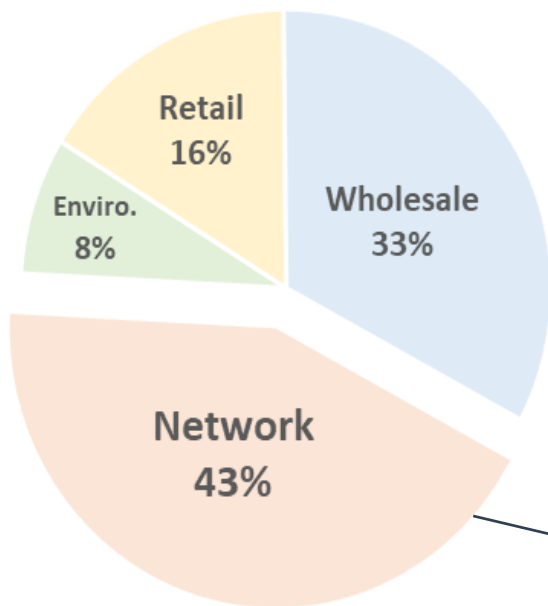
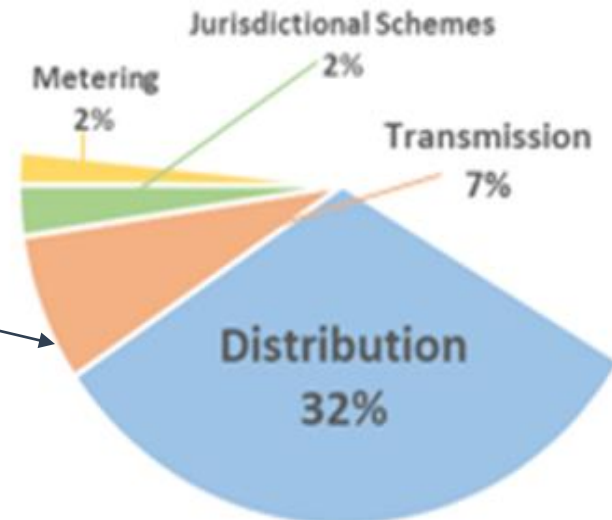
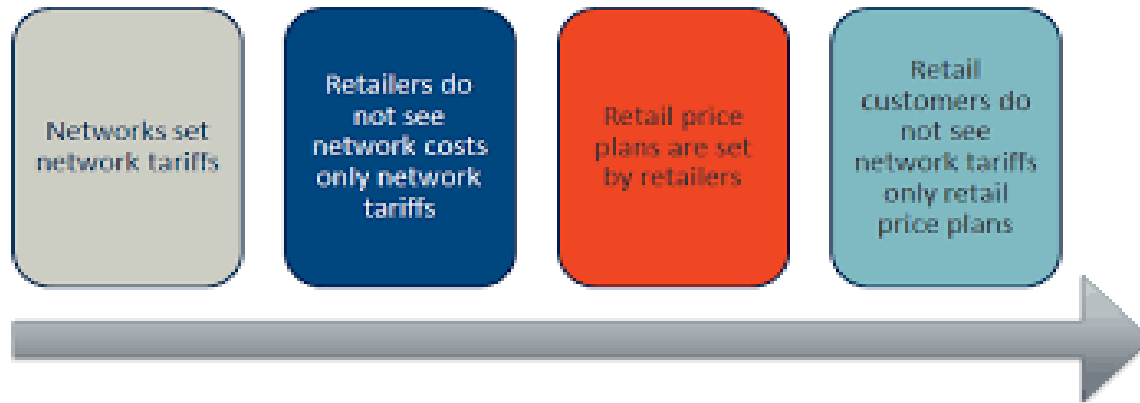


Figure 2 - Components of network charges



Network tariff vs retail tariffs



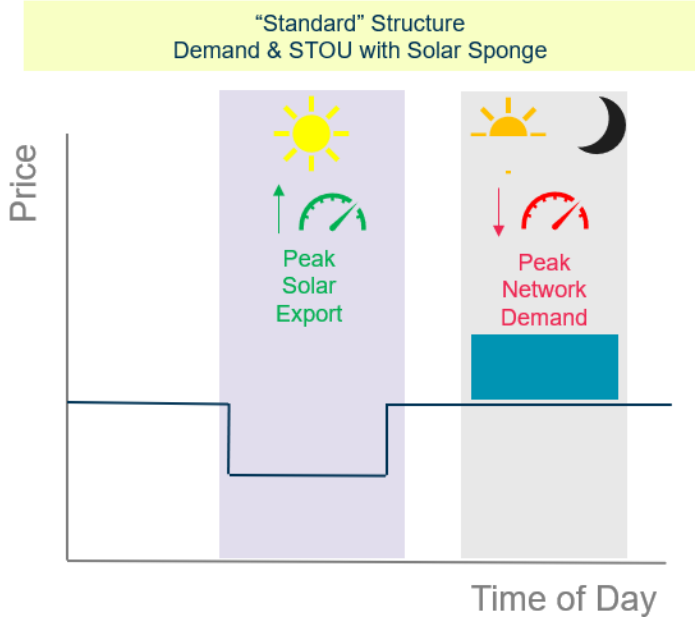
- Examples of retail offers include:
 - Insurance style – where the retailer faces cost reflective network price signals but shields the end customer from this price volatility, for example, by offering the end customer a retail offer with a fixed daily charge and a flat kWh energy charge
 - Pass through offers - where the network tariff structure is reflected in the retail tariff structure
 - **It is up to the retailer to decide how to reflect price signals in their retail offers**

Current network tariff structures?

Tariff structure	Fixed charge \$/day	Peak 6am-9am 6pm-9pm c/kWh	Shoulder 9am-12pm 3pm-6pm c/kWh	Off-peak 12pm-3pm 9pm-6am c/kWh	Demand charge Anytime c/kW
Flat	0.60	12.50	12.50	12.50	n.a
Time-of-use	0.60	17.50	9.50	3.00	n.a
Demand	0.60	17.50	9.50	3.00	20.50


Note – we'll cover export tariffs in the next session

Visual example of a tariff structure



Legend:

Energy 

Seasonal Peak Energy or Demand 

Source: Endeavour Energy tariff reform presentation August 2021

Why getting the right tariff structures is important

- Want best use of assets so consumers pay lowest price possible
- As the market changes and new technologies emerge, may need to adjust structures so costs shared appropriately
- How people use the network leads to what the costs are – e.g. congestion
 - Outside peak times there is more capacity and future costs are low,
 - Customers who use more in peak cost more than those who spread their usage
- Minimise cross subsidies

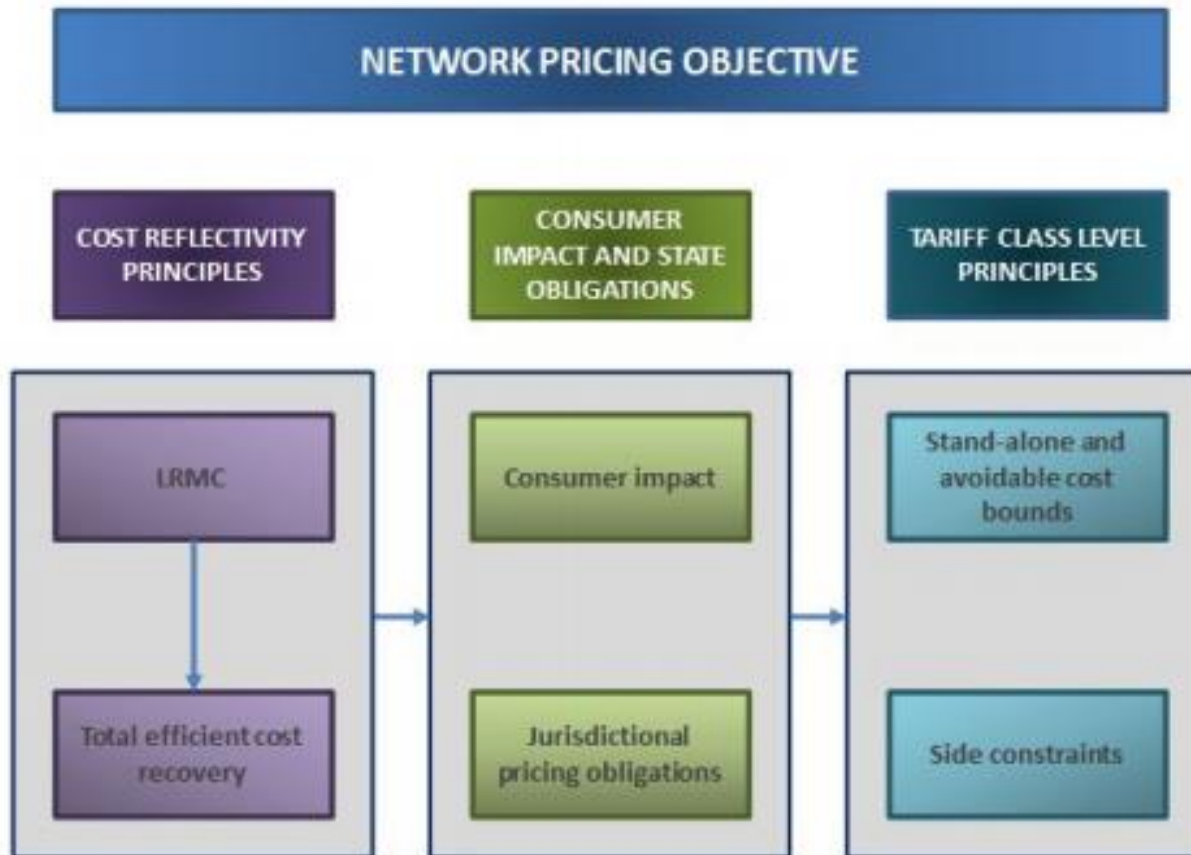
What the rules say about tariffs

- The network pricing objective

NER cl. 6.18.5(a)

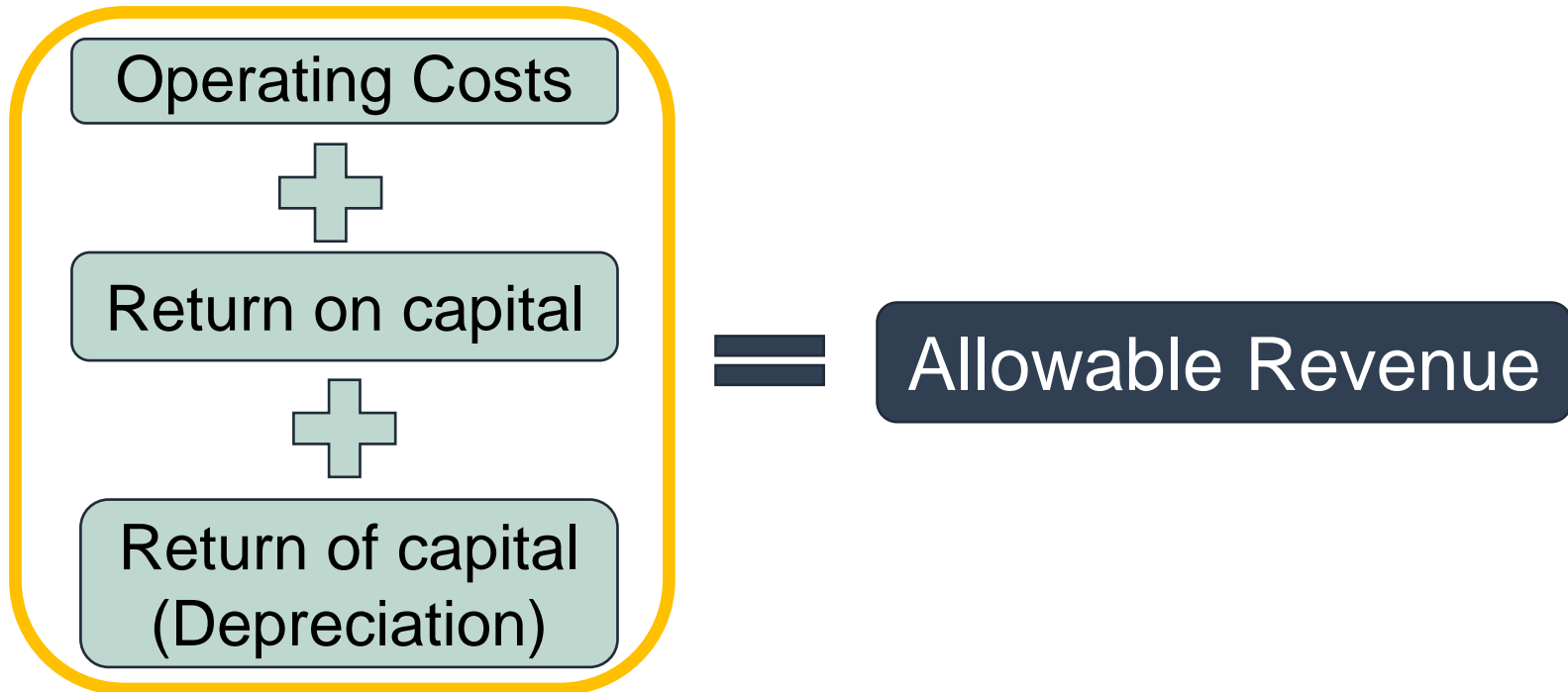
The network pricing objective is that the tariffs that a Distribution Network Service Provider charges in respect of its provision of direct control services to a retail customer should reflect the Distribution Network Service Provider's efficient costs of providing those services to the retail customer.

The pricing principles guide tariff setting



How are tariff / price levels set

Building block - an approach used by regulators to compute the total efficient costs for a monopoly and thereby set maximum allowable revenue \longrightarrow prices.



AER also has extra blocks for incentive schemes and tax.

What is a tariff structure statement?

- A tariff structure statement applies to a distributor's tariffs for the duration of the regulatory control period. It describes:
 - a distributor's tariff classes and structures
 - the distributor's policies and procedures for assigning customers to tariffs
 - the charging parameters for each tariff
 - a description of the approach the distributor will take to setting tariff levels in annual pricing proposals.
- It is accompanied by an indicative pricing schedule

Benefits of TSS

- More time to consult on and assess tariff structures
- Able to consider long term issues / future tariff structure
- More certainty for stakeholders on future tariff changes
- More standardised approach
- Easier to engage with
- Links engagement with regulatory outcomes

How we assess a TSS

Distributors submit their TSS proposals to the AER for approval.

We assess distributors' TSS proposals to account for a number of factors, including:

- network circumstances such as location or number of energy customers
- the expected impact on customers
- customer understanding
- progressing the network pricing objective.

Example of AER-decision making

- AER's decision-making on the Victorian distributors' TSS structures

Unique to Victorian distributors

- We made 1 decision for all 5 distributors because of consistency between them, while noting differences in the body of the text

Draft decision-making

Areas we supported	Areas we required change	Areas for suggested improvement
A new ToU tariff for residential customers (3pm-9pm peak)	Specific changes i.e. requiring AusNet Services to allow residential solar PV customers to opt-out to a flat tariff	closing the legacy tariffs and reassigning those customers to the new time of use and demand tariffs
A new ToU tariff for small business customers (9am-9pm peak)	Requiring five Victorian distributors to introduce additional tariff choice for large business customers	in revised proposals, a statement on how tariff proposals are integrated with demand management and other initiatives
Discounting residential customer cost-reflective tariffs to encourage take-up		amending peak charging windows for business customers to potentially make these more targeted
Methods of calculating LRMC		
Pursuing more locational, targeted responses through demand management and DER strategies		

Between draft and final decision

- Online public forum
 - (including presentations from ECA, brotherhood of ST Laurence and the distributors)
- Distributors submitted their revised proposals
- Stakeholders submitted submissions on the revised proposals and draft decision
- Of note – EV-related submissions from:
 - Vic DELWP
 - EV Council
 - Charging station companies
 - CCP17
 - ECA
 - We then held an EV roundtable to further inform our final decision

Final decision

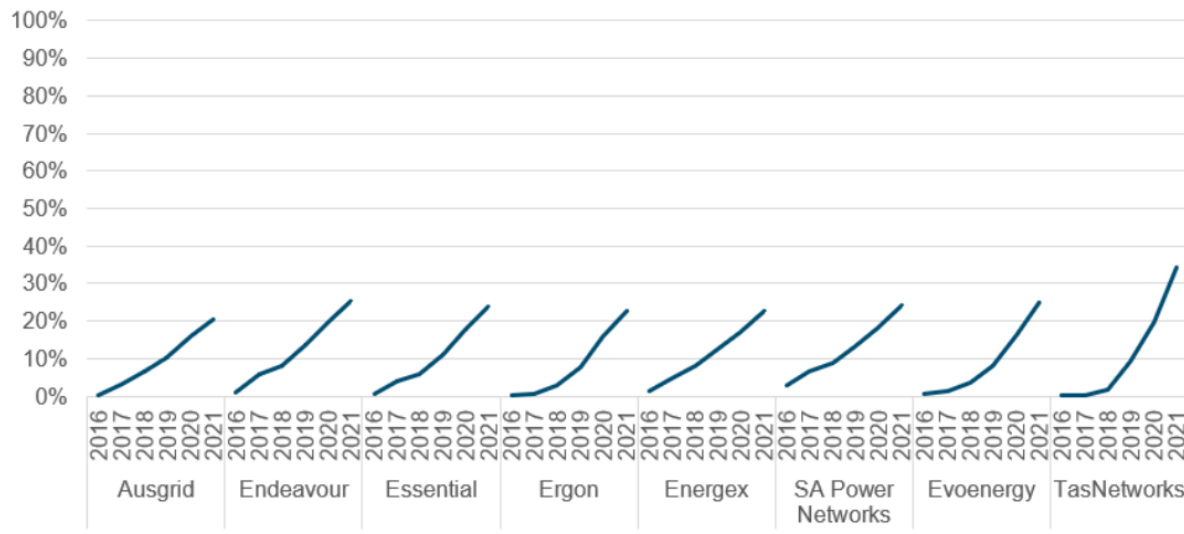
- Revised our approach to tariff choice for large users - recommended tariff trials in the 2021-2026 period, rather than mandate tariff options
- Made a decision on batteries
- Required distributors to provide further information on intended tariff trials in the first year
- Amended assignment policies to remove access to flat rate network tariffs for EV users
- Included sub-sections on:
 - Assignment
 - EVs
 - Integrating network tariff, demand management and DER integration strategies

Open questions – discussion

Developments in the energy sector

- Smart meter rollout
 - Varying levels of smart meter penetration amongst the networks, retailer-led
 - In Victoria, smart meters have already been rolled out by distributors

Figure A.1: Smart meter penetration among small customers

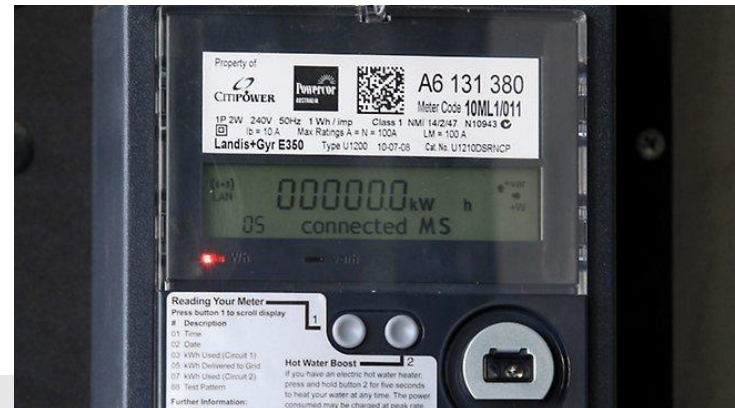
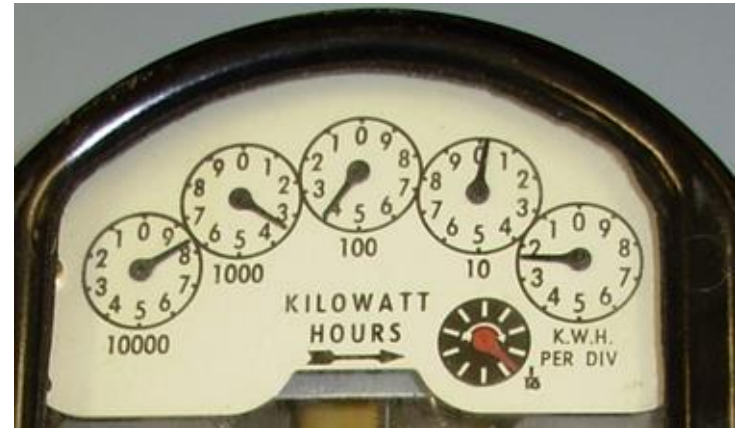


Source: AEMC analysis of AEMO MSATS data.

Note: This chart shows the penetration of smart meters among small customers (residential and small business) as at 30 June of each year.

Developments in the energy sector

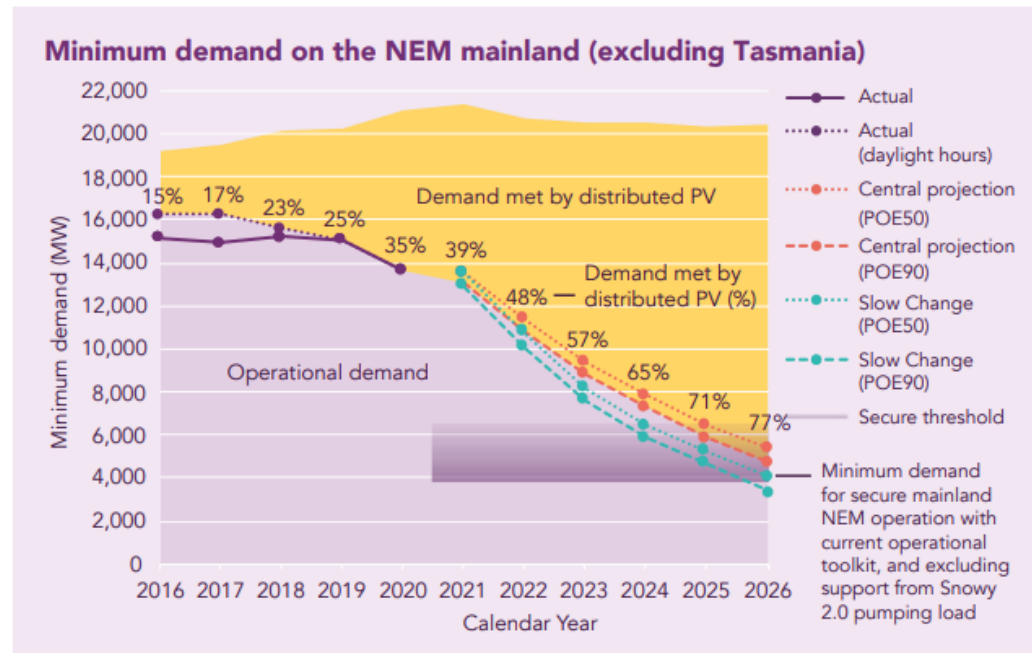
- AEMC metering review, to restart in April 2022:
 - Majority of stakeholders support a higher penetration of smart meters
 - Setting a timeframe to achieve faster rollout
 - Data access
- What are the benefits of smart meters?
 - For distributors, to assist in system planning
 - For customers, to access their own consumption and exports data
 - Required to enable cost-reflective pricing



Developments in the energy sector

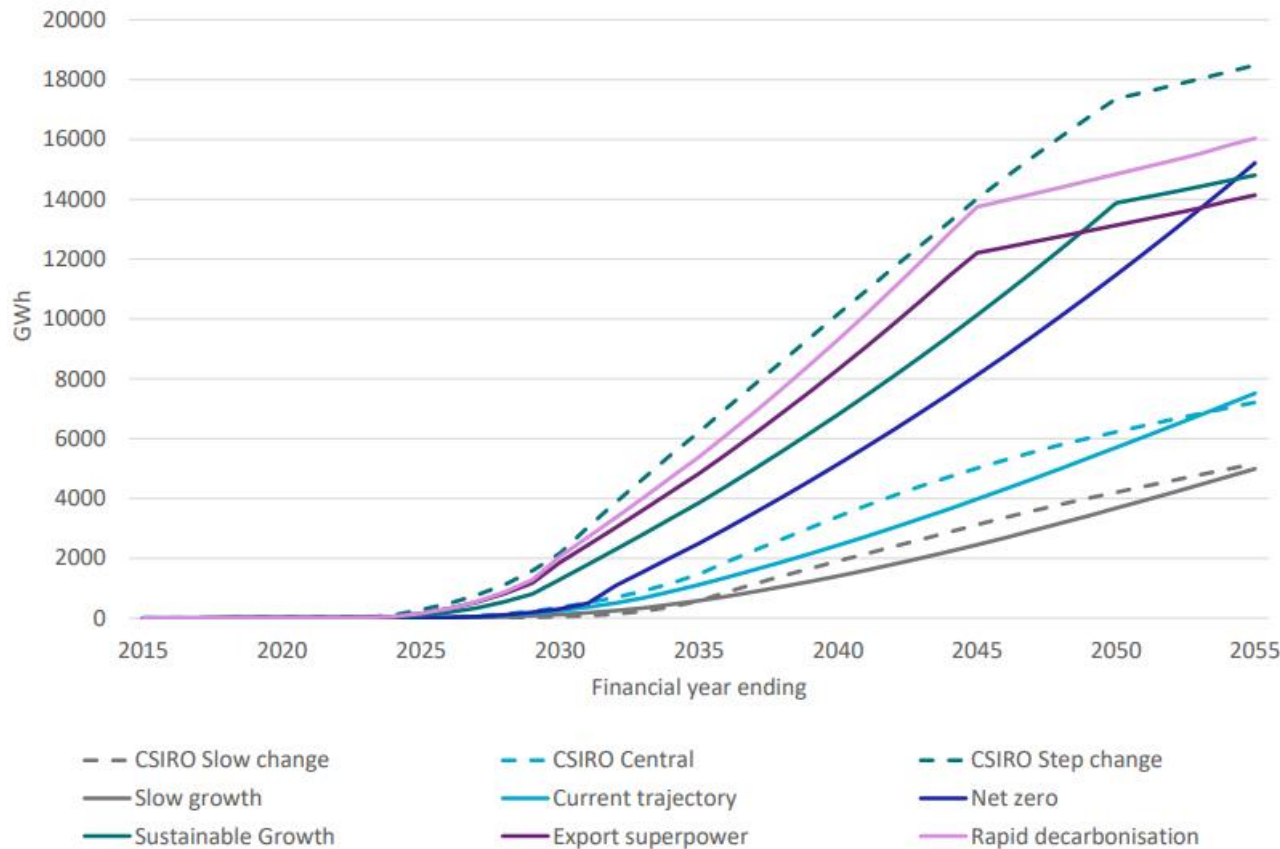
- Increase in DER and minimum demand problems:
 - Minimum demand has been falling across the NEM due to greater penetration of unmanaged rooftop solar
 - Voltage concerns and thermal constraints → networks were not designed for sustained over-voltage
 - Approaching intrinsic capacity → curtailed generation
 - Less of an issue in TAS
- Note – diagram on the right refers to the NEM, but distribution networks face the same issues

AEMO, 2021



Developments in the energy sector

- Electrification of road transport



- By the end of this decade EV uptake will be significant and placing pressure on network capacity

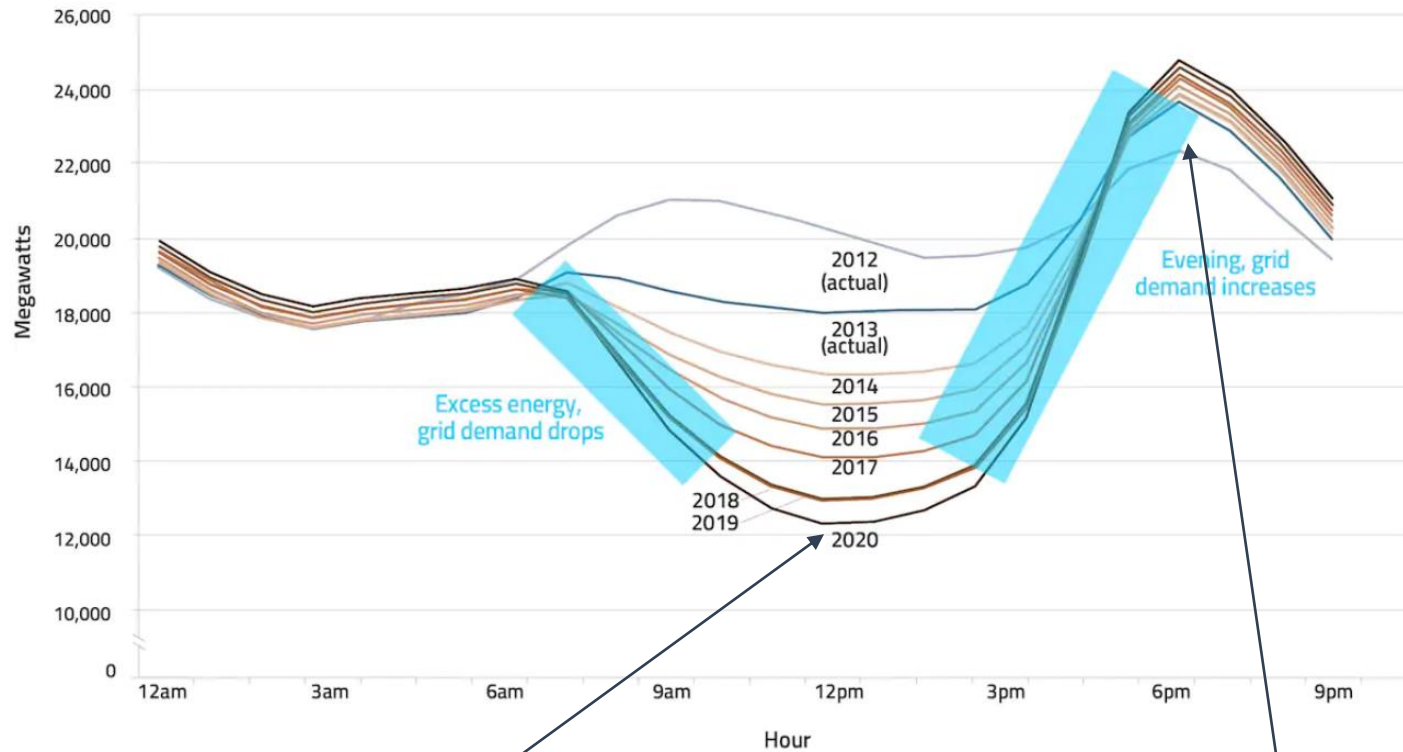
Developments in the energy sector

- Substitution of gas
 - State government goals to reach net zero emissions
 - Full electrification or partial electrification and green gas
 - Places pressure on network capacity for imports
 - Victoria has by far the highest reliance on household gas, ACT has ended the rollout of gas infrastructure to new suburbs
- Miscellaneous developments:
 - Demand management – DNSP providing rebates for reduced consumption during peak periods
 - Energy efficiency programs – e.g. energy efficient light bulbs, smart devices

Why tariff reform?

- Traditionally, network infrastructure was built out to meet ever growing peak demand - expensive asset upgrades are paid off by customers over long time periods.
 - A better solution is to prevent peak demand through tariff reform.
 - Tariff reform can also assist with the minimum demand problems we are now seeing.

What are tariffs addressing?



Greater rooftop solar penetration

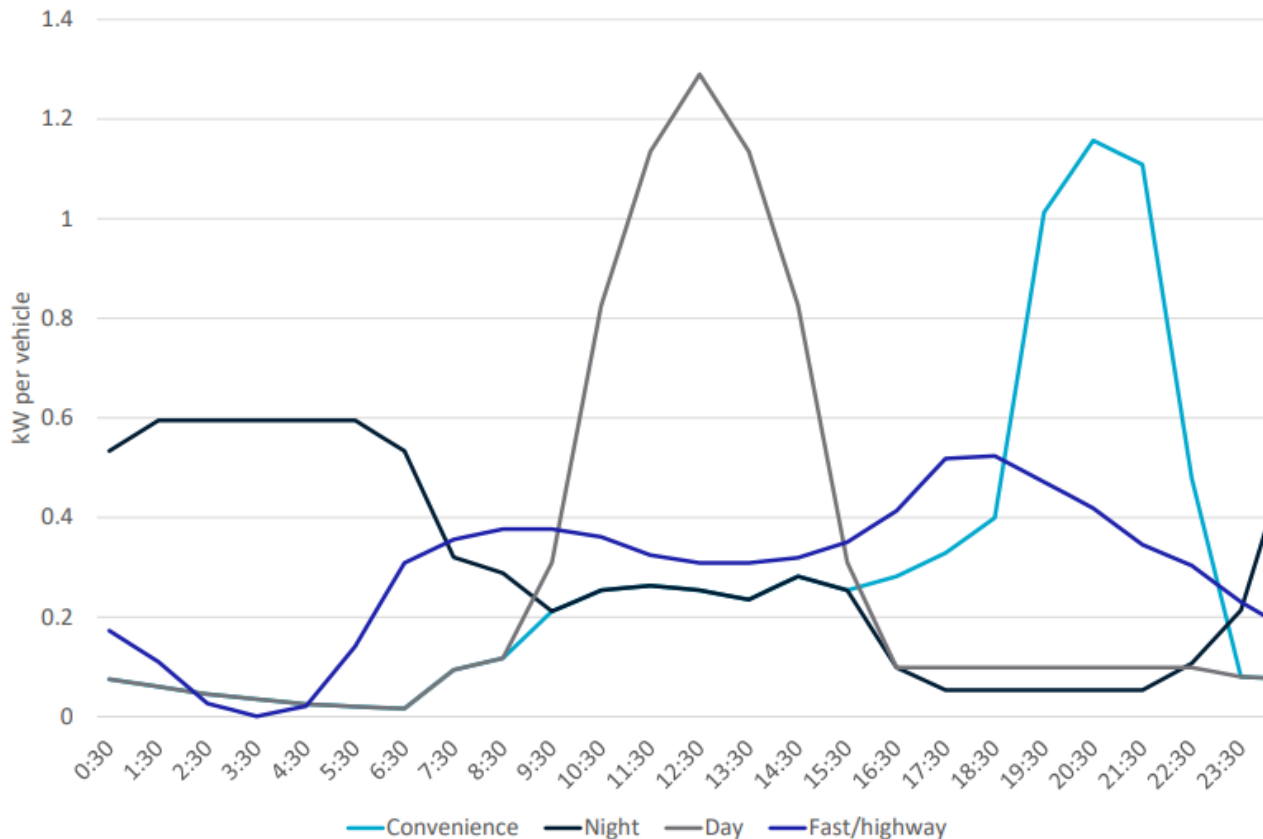
Electrification of transport, potential gas substitution

What are tariffs addressing?

SAPN residential TOU	Time	Unit	Charge 2021-22
Supply charge	Daily	\$/customer/day	\$0.4932
Peak usage	All other times	\$/kWh	\$0.1685
Off-peak usage	1am – 6am	\$/kWh	\$0.0675
Solar sponge usage	10am – 3pm	\$/kWh	\$0.0337

- Network price signals can incentivise consumption during export peaks
- Cheapest prices when consumption is low and exports are high

What are tariffs addressing?



- Tariff reform can incentivise customers to change their behaviour. This example relates to EVs.

Benefits of tariff reform

- Cost-reflective tariffs send signals to consumers to shift energy use from peak times and shift energy export from times when there is too much energy on the grid
 - This can help lower future network investment and lower network costs for all consumers
- Tariff reform paved the way for more equitable tariff options to consumers, based on actual energy use
- Create greater customer choice in how and when they consume electricity and how they pay for it
- DER technology, including EVs, batteries and solar can be better accommodated

Customer advocate session

- Cost reflective tariffs and challenges around shifting / forecasting consumer behaviour
- Tariff reform, inequalities and vulnerable customers

Resources

- AER - [Network Tariff Reform \(webpage\)](#)
- AER - [Network Costs and Long Run Marginal Cost \(Explanatory note\)](#)
- AER – [EV workshop 2020 \(notes\)](#)
- AER – [Overview of building block framework \(2017\)](#)
- AER – [Draft decision on Victorian Distributors' TSS 2021-2026](#)
- AER – [Final decision on Victorian Distributors' TSS 2021-2026](#)
- CCP17 – [Submission on the Victorian EDPR revised proposal and draft decision](#)
- AEMC – [National Electricity Rules](#)